



MODIFICATION INSTRUCTIONS

for the

KODAK MINILOADER 2 PLUS, MODELS STAND-ALONE, M35-M & 480RA

Service Codes 3236, 3239 & 3240

MODIFICATION No. M03

Type 1 REQUIRED

PURPOSE:

To change the speed of the cam motor to stop cam system malfunctions (Error code *22*), to prevent damage to the cam motor relays, and lengthen the life of the cam motor. Film handling is also improved.

This modification will also prevent spurious blowing of the cam motor fuse.

IMPORTANT: Only qualified service personnel should install this modification!

SERIAL NUMBERS:	Model Stand-Alone	(3236)	3001 - 3004
	Model M35-M	(3239)	2603 - 2621
	Model 480RA	(3240)	4001 - 4006

INSTALLATION TIME: Approximately 1 hour.

SPECIAL TOOLS: None

PARTS REQUIREMENT: See Parts list.
NOTE:- The Modification Kit will NOT be stocked in Spares Services. It will be sent direct to the country where the MINILOADER is installed with the correct language EPROM for the country.

PARTS AVAILABILITY: October 1992.

PARTS LIST

PART NO.	DESCRIPTION	QUANTITY
NO PART NUMBER	MODIFICATION KIT	1
THE KIT CONTAINS:		
30025543	RELAY 12 VOLT, 4 POLE	2
HTL 1217	LABEL "STATIC SENSITIVE"	1
NO NUMBER	RETURN ENVELOPE	1
MA3239-M03	MODIFICATION INSTRUCTIONS	1

AND ONE OF THE FOLLOWING

30025871	EPROM, VERSION P1.3, VARIANT 1, ENGLISH/GERMAN
30025872	EPROM, VERSION P1.3, VARIANT 2, ENGLISH/ITALIAN
30025873	EPROM, VERSION P1.3, VARIANT 3, ENGLISH/SPANISH
30025874	EPROM, VERSION P1.3, VARIANT 4, ENGLISH/SWEDISH
30025875	EPROM, VERSION P1.3, VARIANT 5, ENGLISH/PORTUGUESE
30025876	EPROM, VERSION P1.3, VARIANT 6, ENGLISH/NORWEGIAN
30025869	EPROM, VERSION P1.3, VARIANT 7, ENGLISH/FRENCH
30025870	EPROM, VERSION S1.2, VARIANT 1, ENGLISH/SWEDISH

CAUTION



This equipment includes parts and assemblies sensitive to damage from electrostatic discharge. Use caution to prevent damage during all service procedures.

PLEASE NOTE

The information contained herein is based on the experience and knowledge relating to the subject matter gained by Kodak Limited prior to publication.

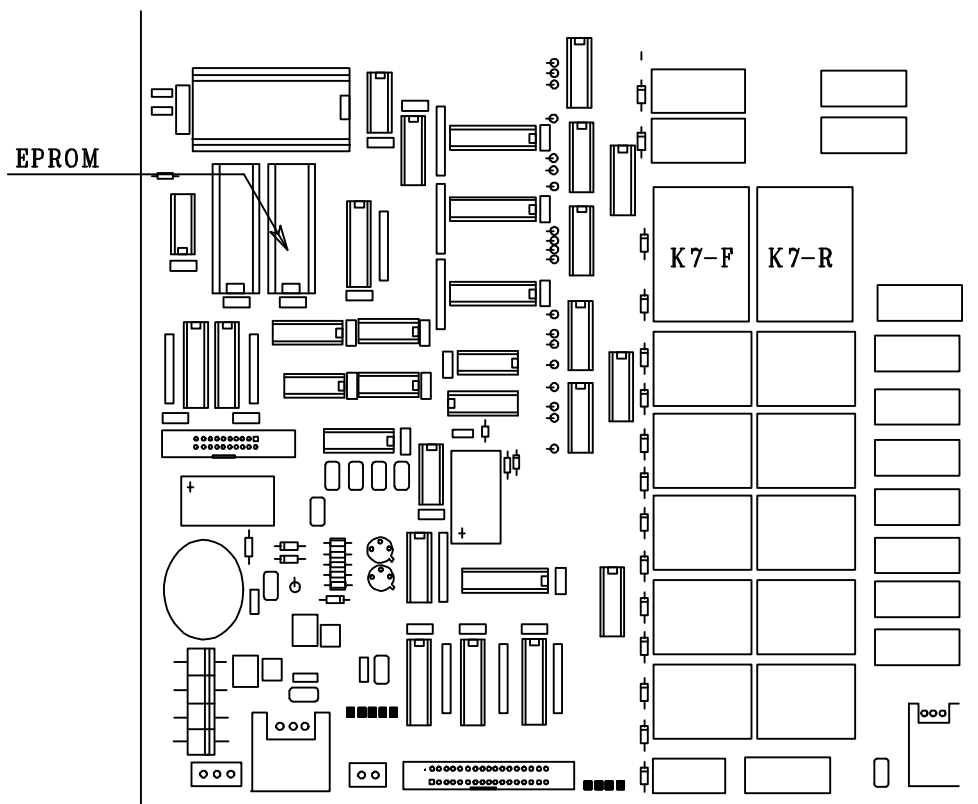
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MODIFICATION INSTRUCTIONS

1. Make a PRINTOUT from the MINILOADER, and make a note of all PARAMETERS. Remove all MAGAZINES from the MINILOADER and switch off the power.
2. Remove the TOP COVER, the right hand (from the front) SIDE PANEL and the FRONT PANEL. Make sure that you disconnect all CABLES as you remove the FRONT PANEL.
3. Pull the PCB 301 forwards and remove the SCREWS which hold the clear plastic PROTECTION COVER in place. Move the COVER to gain access to the EPROM and CAM MOTOR RELAYS K7-F & K7-R. See FIGURE 1.
4. Taking ESD precautions, remove the old EPROM and replace it with the new one. Make sure the EPROM is inserted the correct way round. Place the old EPROM in the BOX that the new EPROM was in, and re-seal the BOX with the LABEL supplied. Write the SERIAL NUMBER of the MINILOADER on the LABEL. Remove the old CAM MOTOR RELAYS and fit the new RELAYS.

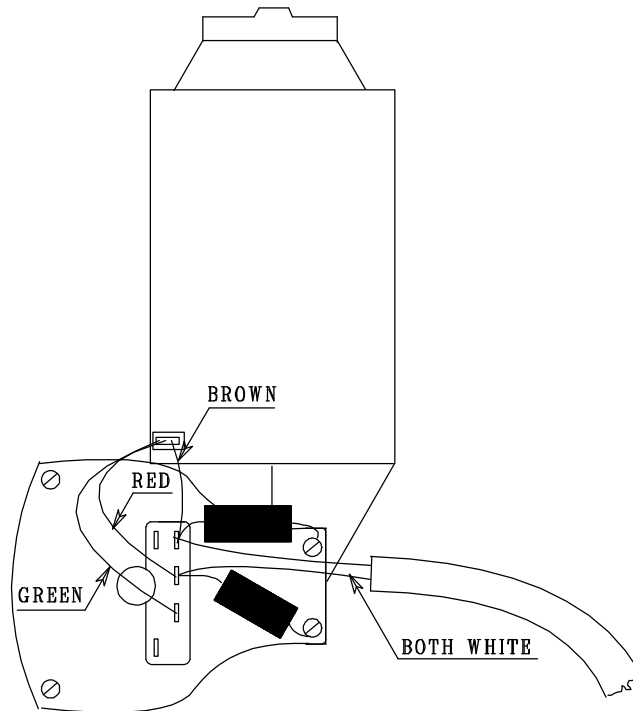
FIGURE 1.



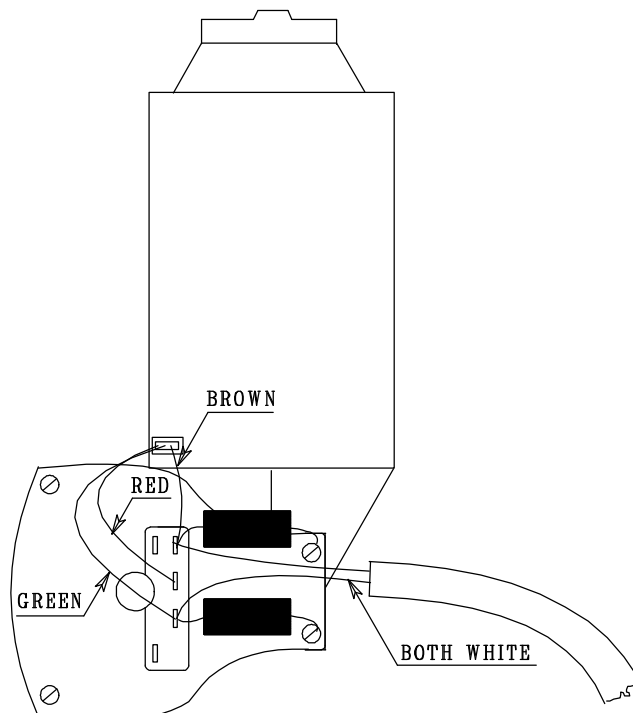
5. Replace the PROTECTION COVER on PCB 301 and push the PCB back into position. Check that all PLUGS are correctly seated, and that all CABLES are correctly routed. Re-fix the FRONT PANEL re-connecting all PLUGS and making sure that no CABLES are trapped.

6. On the CAM MOTOR, identify the CONNECTOR STRIP. Un-solder the WHITE WIRE marked "C" and the CAPACITOR from the CONNECTION that the RED MOTOR WIRE is connected to, and re-solder the WHITE WIRE and the CAPACITOR to the CONNECTION that the GREEN MOTOR WIRE is connected to. See FIGURES 2 & 3.

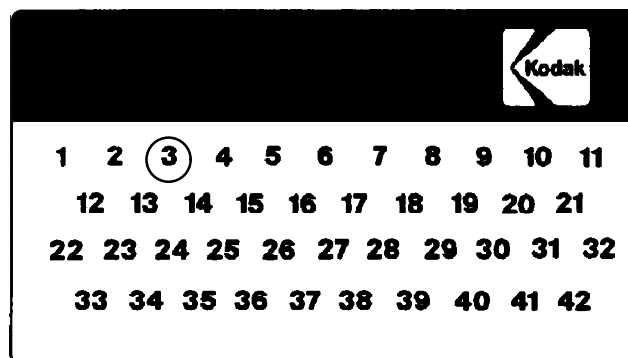
*FIGURE 2.
Before the modification.*



*FIGURE 3.
After the modification.*



7. Replace the right hand SIDE PANEL, and turn the power to the MINILOADER on.
8. Using the SWITCHES on PCB 303 enter the PROGRAMMING MODE. (SWITCH 1 ON) Check that the DATE & TIME are still correct, reset if necessary.
Check the SERIAL NUMBER is still correct, change if necessary.
Select the required LANGUAGE.
Check the PARAMETERS and compare them with the notes you made earlier. Note that PARAMETER P3, "MULTIPLE FILM DETECTION PAUSE" can now be reduced to 0.5 Seconds (previously 1.0 Second) because as the CAM MOTOR is now moving more slowly, less time is required for the FILM to stabilise.
9. Enter STATISTICS MODE (SWITCHES 1 & 2 ON) and zero the FILM COUNTS & MALFUNCTION STATISTICS.
FILM COUNTS are zeroed by pressing BUTTONS S15, S4, & S5 in sequence within 4 Seconds. MALFUNCTION STATISTICS are zeroed by pressing BUTTONS S15, S2 & S8 in sequence within 4 Seconds.
Make another PRINTOUT to ensure that all counts have been zeroed. If necessary, repeat the procedure.
10. On most MINILOADERS, the cycle time after doing this modification does not change. This is because although the CAM MOTOR is running more slowly, the time for HOME POSITION to be reached at the end of the cycle is much reduced as, due to the slower speed, the program is able to stop the CAM MOTOR in HOME POSITION first time, and does not need to "hunt" for HOME POSITION. However, on PROCESSOR INTERFACE MINILOADERS, it is necessary to check that PARAMETER P4 "GAP BETWEEN FILMS" is still correctly set. The correct way to do this is to check the gap between films leaving the PROCESSOR in SERIAL MODE, and alter PARAMETER P4 if necessary.
11. Circle MOD M03 on the MODIFICATION LABEL, re-assemble the MINILOADER and test .
12. Place the re-sealed original EPROM and the original PRINTOUT with the CUSTOMER NAME and the install date of the MINILOADER written on, in the ENVELOPE supplied and mail the ENVELOPE.





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